

REMARKS

Claim Objections

The Examiner objects to claim 5 and 17 reciting “spray” instead of “spraying”. Claim 5 has been amended to recite “spraying”, therefore the Applicant respectfully requests that the objection against that claim be withdrawn. Claim 17 has been amended to clarify the language of the claim.

Claim Rejections – 35 USC § 112

The Examiner rejects the claims as being unclear.

Regarding claim 1, the limitation “pestling the raw materials of the fish-paste product after the step of adding the ozone gas-containing microbubbles” has been added to clarify the subject matter of the claims. Further, the limitation “the interfaces of the ozone gas-containing microbubbles” has been amended to remove the preceding “the”, so the lack of antecedent basis rejection is moot. In addition, claim 1 has been amended to recite “~~the raw materials tissues~~ including proteins and lipids contained in the fish-paste product” in order to clarify that the proteins and lipids are included in the protective shell (i.e. “tissues”) covering the microbubbles.

Claim 9 has been amended to provide antecedent basis for the limitation.

The Applicant respectfully requests that all indefiniteness rejections be withdrawn.

Claim Rejection – 35 USC § 103

In the Office Action, the Examiner rejects the claims as being obvious over Hoashi (JPS56-121462) in view of Garlick (US6,537,494) and Merriam-Webster’s Online Dictionary (and further in view of Swart for claims 11 and 17; and further in view of Ikeuchi for claims 13 and 15). The Applicant respectfully disagrees.

The Examiner states “Garlick’s teaching of ozonated water used to create an ozone fog having the claimed diameter of the ozone particle is deemed to read on adding water containing the ozone gas-containing particle and since Garlick teaches the claimed diameter of the ozone bubbles, Garlick is deemed to teach ozone gas-containing microbubbles”.

However, the claim does not recite “ozone gas-containing **particles**” it recites “ozone gas-containing **microbubbles**”. Garlick not only does not teach the creation of microbubbles, it teaches away from the creation of bubbles entirely. Garlick states “Preferably, sterilizing agent is an aqueous solution” (col. 2, ll. 36-38, emphasis added) and “the injection chamber further comprises … an ultrasonic transducer to achieve the highest saturation level of gas in liquid” (col. 3, ll. 6-10, emphasis added). Therefore, one skilled in the art combining Hoashi with Garlick would not produce “*ozone gas-containing microbubbles*” which are needed to allow “*rupturing the coating shells of the ozone gas-containing microbubbles while said ozone gas-containing microbubbles are in the fish-paste product, thereby sterilizing the fish-paste product by the formation of active oxygen and free-radical species*” as recited in the claims. The fact that the **liquid droplet size** in Garlick corresponds to the **microbubble size** of the claimed invention is coincidental and does not cause the term “liquid droplet” to read upon “microbubble”. Droplets are liquid surrounded by gas; bubbles are gas surrounded by liquid. They are, if anything, opposites. You can pop a bubble to release ozone; you cannot pop a drop.

The Applicants respectfully request that the rejection of obviousness be withdrawn for all the claims.

In addition, the Applicant has requested that the following points be made:

[Regarding claim 17:] there are neither description nor suggestion about the composition requirement consisting of “*giving a secondary stimulation to a part of the ozone gas-containing microbubbles after processing and packaging the fish-paste product, thereby further sterilizing the fish-paste product by the further formation of active oxygen and free-radical species*” in the cited prior art.

[Regarding claim 11:] Here, it is antibacterial agents that Swart has described. There is durability the feature in antibacterial agents. On the other hand, it is an obvious fact in ozone that the durability is not in food. The invention of Swart doesn't allow for the ozone reacting with the organism at once and disappearing. The bactericidal effect by antibacterial agents and the bactericidal effects by the high frequency irradiation were added simply and matched to the synergistic effect that Swart meant. On the other hand, the present invention uses various stimulations (refer to claims 9, 11, 13, and 15 of the present invention) as a method of drawing out the activated species with a stronger antiseptic capability from ozone. The present invention doesn't request sterilizing properties from said stimulation like the invention of Swart. In other words, the purpose to use the high frequency irradiation is different between the present invention and the invention of Swart. From this thing, claim 11 of the present invention is non-obvious matter from Swart at least. Moreover, claim 11 of the present invention is non-obvious matter from Hoashi in view of Garlick further in view of Swart et al., because claim 11 of the present invention is non-obvious matter from Hoashi in view of Garlick as previously stated.

[Regarding claims 13 and 15:] Continuously, the examiner recognizes that claims 13 and 15 of the present invention are obvious matter from Hoashi in view of Garlick and further in view of Ikeuchi. Here, the invention of Ikeuchi only describes the method of elongating food and the method of heating it in addition. On the other hand, the present invention uses the stimulations described in claims 13 and 15 of the present invention as a method of drawing out the activated species with a stronger antiseptic from ozone. In other words, the purpose to use the microwave is different between the present invention and the invention of Ikeuchi. From this thing, claims 13 and 15 of the present invention are non-obvious matter from Ikeuchi at least. Moreover 1 claims 13 and 15 of the present invention are non-obvious matter from Hoashi in view of Garlick further in view of Ikeuchi , because claims 13 and 15 of the present invention are non-obvious matter from Hoashi in view of Garlick as previously stated.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed,

the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

Respectfully submitted,

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